## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-43 (Cancelled).

44. (Withdrawn) A method of treatment that requires removal, deactivation or killing of unwanted tissues or cells comprising administering to a patient in need thereof an amount of a phenothiazinium compound of Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

(I)

wherein:

A and B each independently is

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring;

and wherein  $X^{P}$  is a counteranion and P is 1, 2 or 3; except for the compounds in which A and B are both either  $-N(CH_3)_2$  or  $-N(CH_2CH_3)_2$ , wherein said compound of Formula (I) is administered in an amount sufficient to effect said treatment.

45. (Withdrawn) The method according to claim 44 wherein, in the phenothiazinium compound of Formula (I), A and B are each independently selected from the group consisting of

$$-N$$
 and  $-N$   $R^1$ 

wherein Z is selected from the group consisting of:  $CH_2$ ,  $CH_2$ - $C_{1-6}$ -alkyl, O, S,  $SO_2$ , NH, NCH<sub>3</sub>, NC<sub>2</sub>H<sub>5</sub>, NCH<sub>2</sub>CH<sub>2</sub>OH, and NCOCH<sub>3</sub> and R<sup>1</sup> and R<sup>2</sup> are each independently linear or branched  $C_nH_{2n}Y$ , where n is 1-10, and Y is selected from the group consisting of: H, F, Cl, Br, I, -OH, -OCH<sub>3</sub>, -OC<sub>2</sub>H<sub>5</sub>, -OC<sub>3</sub>H<sub>7</sub>, -CN and -OCOCH<sub>3</sub>.

46. (Withdrawn) The method according to Claim 44 wherein, in the compound of Formula (I), the counteranion is selected from the group consisting of: F<sup>-</sup>, Br<sup>-</sup>, Cl<sup>-</sup>, I<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, SCN<sup>-</sup>, ClO<sub>3</sub><sup>-</sup>, ClO<sub>4</sub><sup>-</sup>, IO<sub>3</sub><sup>-</sup>, BF<sub>4</sub><sup>-</sup>, HSO<sub>4</sub><sup>-</sup>, H<sub>2</sub>PO<sub>4</sub><sup>-</sup>, CH<sub>3</sub>SO<sub>4</sub><sup>-</sup>, N<sub>3</sub><sup>-</sup>, SO<sub>4</sub><sup>2</sup><sup>-</sup>, HPO<sub>4</sub><sup>2</sup><sup>-</sup>, PO<sub>4</sub><sup>3</sup><sup>-</sup>, acetate, lactate, citrate, tartrate, glycolate, glycerate, glutamate, β-hydroxyglutamate, glucouronate, gluconate, malate and aspartate.

- 47. (Withdrawn) The method according to Claim 44 wherein, in the compound of Formula (I), the counteranion is selected from the group consisting of: Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>, F<sup>-</sup>, NO<sub>3</sub><sup>-</sup>, HSO<sub>4</sub><sup>-</sup>, CH<sub>3</sub>CO<sub>2</sub><sup>-</sup>, a dianion, and a trianion.
- 48. (Withdrawn) The method according to Claim 44 wherein, in the compound of Formula (I), A and B are the same or different and R<sup>1</sup> and R<sup>2</sup> are selected independently from the group consisting of: ethyl, n-propyl, n-butyl, i-butyl, n-pentyl, i-pentyl, n-hexyl, HO(CH<sub>2</sub>)<sub>2-</sub>, 2-ethylpiperidino, 2-methylpyrrolidino and cyclohexyl.
- 49. (Withdrawn) The method according to Claim 44 wherein, in the compound of Formula (I), A and B are the same or different and R<sup>1</sup> and R<sup>2</sup> are selected independently from the group consisting of ethyl, n-propyl, n-butyl, i-butyl, n-pentyl, i-pentyl, n-hexyl, 2-ethylpiperidino, 2-methylpyrrolidino and cyclohexyl.
- 50. (Withdrawn) The method according to Claim 44 wherein, in the compound of Formula (I), A and B are the same or different and R<sup>1</sup> and R<sup>2</sup> are selected independently from the group consisting of ethyl, n-butyl, i-butyl, n-pentyl, i-pentyl, n-hexyl, 2-ethylpiperidino, 2-methylpyrrolidino and cyclohexyl.
- 51. (Withdrawn) The method according to Claim 44 wherein, in the compound of Formula (I), A and B are the same and both  $R^1$  and  $R^2$  are selected from the group consisting of n-propyl, n-butyl and n-pentyl.

- 52. (Withdrawn) A method of treatment that requires removal, deactivation or killing of unwanted tissues or cells comprising administering to a subject in need thereof a moiety selected from the group consisting of:
- 3,7-(tetra-n-propylamino)-phenothiazin-5-ium;
- 3,7-(tetra-n-butylamino)-phenothiazin-5-ium;
- 3,7-(tetra-n-pentylamino)-phenothiazin-5-ium;
- 3,7-(tetra-iso-pentylamino)-phenothiazin-5-ium;
- 3-(N,N-di-n-butylamino)-7-(N,N-di-n-propylamino)-phenothiazin-5-ium;
- 3-(N,N-di-n-hexylamino)-7-(N, N-di-n-propylamino)-phenothiazin-5-ium;
- 3-(2-ethylpiperidino)-7-(N, N-di-n-pentylamino)-phenothiazin-5-ium;
- 3-(2-methylpyrrolidino)-7-(N, N-di-n-pentylamino)-phenothiazin-5-ium;
- 3,7-(N, N-tetra- iso-butylamino)-phenothiazin-5-ium;
- 3-(N, N-di-n-butylamino)-7-(N, N-di-iso-pentylamino)-phenothiazin-5-ium;
- 3-(N,N-diethanolamino)-7-(N, N-di-n-pentyiamino)-phenothiazin-5-ium:
- 3-(N,N-diethylamino)-7-(N, N-di-n-propylamino)-phenothiazin-5-ium;
- 3-(N, N-di-n-pentylamino)-7-(N, N-di-n-propylamino)-phenothiazin-5-ium
- 3-(N, N-di-n-butylamino)-7-(N, N-di-n-pentylamino)-phenothiazin-5-ium; and
- 3-((N-ethyl-N-cyclohexyl) amino)-7((-N-ethyl)-N-cyclohexyl) amino-phenothiazin-5-ium;

wherein the counteranion is selected from the group consisting of Cl<sup>-</sup>, Br<sup>-</sup> and I<sup>-</sup>, and

wherein said moiety is administered in an amount sufficient to effect said treatment.

53. (Withdrawn) A composition comprising one or more compounds of Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & &$$

(I)

wherein:

A and B each independently is

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring; and wherein  $X^{P}$  is a counteranion and P is 1, 2 or 3; except for the compounds in which A and B are both either  $-N(CH_3)_2$  or  $-N(CH_2CH_3)_2$ ; and a diluent or excipient.

54-64 (Cancelled).

65. (Withdrawn) A conjugate or composite formed between a compound of formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

(I)

wherein:

A and B each independently is

$$-N_{p'}^{R'}$$

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring, and wherein  $X^{P-}$  is a counteranion and P is 1, 2 or 3, except for the compounds in which A and B are both either —N(CH<sub>3</sub>)<sub>2</sub> or -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, and a polymer.

66. (Withdrawn) The conjugate or composite of claim 65 wherein said polymer includes anhydride and/or ester groups.

## 67. (Withdrawn) A compound formed by the reaction between a compound Formula (I):

(I)

wherein:

A and B each independently is

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring, and wherein X<sup>P-</sup> is a counteranion and P is 1, 2 or 3, except for the compounds in which A and B are both either —N(CH<sub>3</sub>)<sub>2</sub> or -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, and a chlorotriazine derivative.

68. (Withdrawn) A compound according to claim 67 wherein the chlorotriazine derivative is a polymer having chlorotriazine groups attached thereto.

- 69. (Withdrawn) The conjugate or composite according to claim 65 further comprising a diluent or excipient.
- 70. (Withdrawn) A method of treating pre-cancerous conditions, cancer, ophthalmological disease, vascular problems, arteriosclerosis, restenosis, autoimmune diseases, skin diseases and other benign conditions, the method comprising:

  administering to a subject in need thereof a therapeutically effective amount of a compound of Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & &$$

(I)

wherein:

A and B each independently is

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring; and wherein  $X^{P}$  is a counteranion and P is 1, 2 or 3;

except for the compounds in which A and B are both either -N(CH<sub>3</sub>)<sub>2</sub> or -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>; and exposing said subject to light to render active said compound.

- 71. (Withdrawn) The method according to claim 70 wherein said compound is administered and the light exposure is given up to 48 hours after a drug is initially administered.
- 72. (Withdrawn) The method according to claim 70 wherein said compound is administered and the light exposure is given up to 3 hours after a drug is initially administered.
- 73. (Withdrawn) The method according to claim 70 wherein R<sup>1</sup> and R<sup>2</sup> are both n-propyl and said light exposure is given up to 10 minutes after a drug is initially administered.
- 74. (Withdrawn) The method according to claim 71 wherein light exposure is given within 1 minute after a drug is initially administered.
- 75. (Withdrawn) The method according to claim 71 wherein light exposure is given at the point of drug administration.
- 76. (Withdrawn) The method according to claim 70 wherein R<sup>1</sup> and R<sup>2</sup> are both n-pentyl and said light exposure is given up to one hour after a drug is initially administered.
- 77. (Currently Amended) A method of treatment of microbial infections, burn wounds and other lesions and dental bacterial disease a fungal infection due to Candida albicans, Gram

negative bacterial infection due to *E.coli* or *P. aeruginosa*, or Gram positive bacterial infection due to *S. aureus* or methicillin resistant *S. aureus*, the method comprising administering to a subject in need thereof, by systemic administration or by <u>local</u> application to the <u>an</u> area to be treated, a therapeutically effective amount of a compound of Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

(I)

wherein:

A and B each independently is

$$-N$$
 $^{R'}$ 

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring;

and wherein X<sup>P</sup> is a counteranion and P is 1, 2 or 3;

except for the compounds in which A and B are both either  $-N(CH_3)_2$  or  $-N(CH_2CH_3)_2$ ; and exposing said area to light to render active said compound and

thereby effecting said treatment of said fungal infection, said Gram negative bacterial infection or said Gram positive bacterial infection.

- 78. (Currently Amended) The method according to claim 77 where  $\underline{R'} \underline{R}^4$  and  $\underline{R''}$  are n-butyl.
- 79. (Currently Amended) A method of <u>killing, deactivating or removing any Candida</u>

  albicans, E. coli, P. aeruginosa, S. aureus or methicillin resistant S. aureus present on sterilizing
  a surface or <u>in</u> a fluid comprising:

contacting or applying a compound of the Formula (I):

$$\left[\begin{array}{c} \\ \\ \\ \\ \\ \end{array}\right]_{P} X^{P}$$

(I)

wherein:

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring;

and wherein  $X^{P}$  is a counteranion and P is 1, 2 or 3;

except for the compounds in which A and B are both either -N(CH<sub>3</sub>)<sub>2</sub> or -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>; to said surface or fluid; and

activating said compound by means of light exposing said surface or fluid to which said compound has been applied or contacted to light to activate said compound and thereby kill, deactivate or remove said *Candida albicans*, *E. coli*, *P. aeruginosa*, *S. aureus* or methicillin resistant *S. aureus*.

80. (Withdrawn) An article having at least one surface to which is attached a compound, conjugate or composite comprising a compound of Formula (I):

(I)

wherein:

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring; and wherein  $X^{P}$  is a counteranion and P is 1, 2 or 3; except for the compounds in which A and B are both either  $-N(CH_3)_2$  or  $-N(CH_2CH_3)_2$ .

- 81. (Withdrawn) The article according to claim 80 wherein attachment is by covalent bonds or by intermolecular interactions.
- 82. (Withdrawn) The article according to claim 80 wherein said article is a medical device.
- 83. (Withdrawn) The article according to claim 80 wherein said article is for use in the food industry.
- 84. (Currently Amended) A method for killing, deactivating or removing any Candida albicans, E. coli, P. aeruginosa, S. aureus or methicillin resistant S. aureus present in sterilizing fluids a fluid comprising contacting the fluid with a conjugate or composite formed between: a compound of Formula (I):

$$\left[\begin{array}{c} \\ \\ \\ \\ \\ \end{array}\right]_{P} X^{P}$$

(I)

wherein:

A and B each independently is

wherein R' and R" each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring, and wherein X<sup>P</sup> is a counteranion and P is 1, 2 or 3, except for the compounds in which A and B are both either -N(CH<sub>3</sub>)<sub>2</sub> or -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, and a polymer while the conjugate or composite is illuminated and exposing said fluid to which said conjugate or composite has been contacted to light to activate said conjugate or composite and thereby kill, deactivate or remove said *Candida albicans*, *E. coli*, *P. aeruginosa*, *S. aureus* or methicillin resistant *S. aureus*.

## 85. (Withdrawn) A compound of Formula (I)

$$\left[\begin{array}{c} \\ \\ \\ \\ \\ \end{array}\right]_{P} X^{P}$$

(I)

wherein:

A and B each independently is

wherein R' and R" each independently is a linear, branched or cyclic hydrocarbon group, or R' and R" together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring;

and wherein X<sup>P</sup> is a counteranion and P is 1, 2 or 3;

except for the compounds in which A and B are the same and are selected from the group consisting of -N(CH<sub>3</sub>)<sub>2</sub>, -N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, N(n-Pr)<sub>2</sub>, -N(n-Bu)<sub>2</sub>, -N(n-Pent)<sub>2</sub>, -N(n-Hex)<sub>2</sub>, -N(n-Hex)<sub>2</sub>, -N(n-Hex)<sub>2</sub>, -N(n-Hex)<sub>2</sub>, -N(n-Hex)<sub>2</sub>, -N(n-Hex)<sub>3</sub>, -N(n-Hex)<sub>4</sub>, -N(n-Hex)<sub>5</sub>, -N(n-Hex)<sub>5</sub>, -N(n-Hex)<sub>6</sub>, -N(n-Hex)<sub>6</sub>, -N(n-Hex)<sub>6</sub>, -N(n-Hex)<sub>6</sub>, -N(n-Hex)<sub>7</sub>, -N(n-Hex)<sub>8</sub>, -N(n-Hex)<sub></sub>

and not including those in which A is selected from  $-N(Me)_2$  or  $-N(Et)_2$  and B is selected from the group consisting of:  $-N(CH_2CH_2OH)_2$ , piperidino, morpholino, thiomorpholino,  $-N(Et)_2$ ,  $-N(MeEt)_2$ , and  $-N(Me)_2$ .

86. (Withdrawn) The compound according to claim 85 wherein said compound consists of a moiety selected from the group consisting of:

3,7-(tetra-iso-pentylamino)-phenothiazin-5-ium

3-(N, N-di-n-butylamino)-7-(N,N-di-n-propylamino)-phenothiazin-5-ium;

3-(N,N-di-n-hexylamino)-7-(N,N-di-n-propylamino)-phenothiazin-5-ium;

3-(2-ethylpiperidino)-7-(N,N-di-n-pentylamino)-phenothiazin-5-ium;

3-(2-methylpyrrolidino)-7-(N, N-di-n-pentylamino)-phenothiazin-5-ium;

3,7-(N,N-tetra- iso-butylamino)-phenothiazin-5-ium;

3-(N, N-di-n-butylamino)-7-(N, N-di-iso-pentylamino)-phenothiazin-5-ium;

3-(N, N-diethanolamino)-7-(N, N-di-n-pentylamino)-phenothiazin-5-ium;

3-(N, N-diethylamino)-7-(N, N-di-n-propylamino)-phenothiazin-5-ium;

3-(N, N-di-n-pentylamino)-7-(N, N-di-n-propylamino)-phenothiazin-5-ium;

3-(N, N-di-n-butylamino)-7-(N, N-di-n-pentylamino)-phenothiazin-5-ium; and

3-((N-ethyl-N-cyclohexyl)amino)-7((-N-ethyl)-N-cyclohexyl)amino-phenothiazin-5-ium;

in which the counteranions are selected from the group consisting of: Cl<sup>-</sup>, Br<sup>-</sup> and I<sup>-</sup>.

87. (Withdrawn) A medicament comprising a compound of Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \end{array}\right]_{P} \quad X^{P}$$

(I)

wherein:

wherein R' and R'' each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R'' together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring; and wherein  $X^{P-}$  is a counteranion and P is 1, 2 or 3; except for the compounds in which A and B are both either  $-N(CH_3)_2$  or  $-N(CH_2CH_3)_2$ .

88. (Withdrawn) An anticancer agent or an antibacterial or an antifungal or an antiviral comprising a compound Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

(I)

wherein:

A and B each independently is

wherein R' and R'' each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R'' together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring; and wherein  $X^{P-}$  is a counteranion and P is 1, 2 or 3; except for the compounds in which A and B are both either  $-N(CH_3)_2$  or

-N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>.

- 89. (Currently Amended) A <u>The</u> method of treatment of microorganisms comprising according to claim 77 wherein said method comprises administering to said a subject, by application to an area to be treated, in need thereof a said therapeutically effective amount of a said compound of Formula (I) as defined in claim 87 and exposing the compound to light to render the compound active.
- 90. (Currently Amended) A <u>The</u> method according to claim 89 77 wherein said method is a <u>method of treating said Gram negative bacterial infection or said Gram positive bacterial infection in which the microorganisms are bacteria</u>.
- 91. (Currently Amended) A <u>The</u> method according to claim 90 <u>wherein said method is a</u> <u>method of treating said Gram positive bacterial infection due to methicillin resistant S. aureus in which the bacteria are antibiotic resistant bacteria.</u>
- 92. (Withdrawn) A PDT agent or a photodiagnostic agent comprising a compound of Formula (I):

$$\left[\begin{array}{c|c} & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

**(I)** 

wherein:

in which R' and R'' each independently is an optionally substituted linear, branched or cyclic hydrocarbon group, or R' and R'' together with the N atom to which they are attached form an optionally substituted 5-, 6- or 7-membered ring; and where  $X^{P-}$  is a counteranion and P is 1, 2 or 3; except for the compounds in which A and B are both either  $-N(CH_3)_2$  or  $-N(CH_2CH_3)_2$ .

- 93. (Cancelled).
- 94. (Withdrawn) A method of treatment of pre-cancerous conditions, cancer, ophthalmological disease including macular degeneration, vascular problems, arteriosclerosis, restenosis, autoimmune diseases, skin diseases and other benign conditions comprising administering to a subject in need thereof a therapeutically effective amount of a compound of Formula (I) as defined in claim 87 and exposing the compound to light to render the compound active.
- 95. (Cancelled).
- 96. (Withdrawn) A method of photochemical internalisation comprising applying a compound of Formula (I) as defined in claim 87 to a subject to assist the uptake and subcellular localisation of drugs.
- 97. (Withdrawn) A method of photodetection and/or photodiagnosis comprising applying a compound of Formula (I) as defined in claim 87 to a subject and exposing the compound to light to enhance fluorescence of a tumour.
- 98. (New) The method according to claim 77 wherein said fungal infection, Gram negative bacterial infection or Gram positive bacterial infection is present at a burn wound, ulcer or surgical wound.

- 99. (New) The method according to claim 77 wherein said fungal infection, Gram negative bacterial infection or Gram positive bacterial infection is present on the gums of said subject.
- 100. (New) The method according to claim 77 wherein said fungal infection, Gram negative bacterial infection or Gram positive bacterial infection is present in a skin disease selected from psoriasis, acne, vitiligo and eczema.